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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,839

03/22/2004

David P. Lieb

DPL-1

3015

7590

10/13/2006

DAVID BENNETT ESQ.
7, THOMAS RICE DRIVE
WESTBOROUGH, MA 01581

EXAMINER

KEMMERLE III, RUSSELL J

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,839

Applicant(s)

LIEB, DAVID P.

Examiner

Russell J. Kemmerle III

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/22/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Page 1, about halfway through the first paragraph of the background of the invention; in the phrase "this can be accomplished used stabilizers" the word "used" appears to be a mistyping of "using";

Page 4, first line after the list of impurity levels; in the phrase "mixed with as a temporary binder" the word "as" appears to be unnecessary.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Coblenz (4,568,650).

Referring to claims 1 and 3, Coblenz discloses putting a ceramic in an oxidizing environment at a temperature significantly high to obtain some level stress relief, and holding it at that temperature in that environment for long enough to achieve the desired level of oxidation (Col 2 lines 14-19, Claim 1). Coblenz further discloses doing this with yttria stabilized zirconia, and as a result observing a lightening of the color (for example from black to yellow) (Col 4 lines 55-63, Col 5 lines 20-25).

Thus, Coblenz discloses or reasonably suggests every limitation of claims 1 and 3, and thus anticipates the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coblenz in view of the admitted prior art (page 2 of the applicant's specification).

Coblenz is relied upon as discussed above.

Coblenz does not disclose the use of the method as described above where the yttria stabilized zirconia has impurities of oxides greater than 0.5% by weight.

The admitted prior art discloses that the darkening of the yttria stabilized zirconia is thought to result from a reduction of impurities in the yttria stabilized zirconia.

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have used the method of oxidizing a yttria stabilized zirconia piece in order to lighten its color as taught by Coblenz where the yttria stabilized zirconia contained oxide impurities since the applicant's specification discloses that the reduction of these impurities is thought to cause the dark color of the yttria stabilized zirconia piece.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coblenz in view of Lauder (5,095,730).

Coblentz is relied upon as discussed above.

Coblentz does not disclose the use of yttria stabilized zirconia as a can tool.

Lauder discloses the method of using zirconia combined with yttria in forming a spinnecker disc or can tool (Col 7 lines 5-7, 51-60)

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have modified the method taught by Coblentz of placing yttria stabilized zirconia at an elevated temperature in an oxidizing atmosphere to lighten the color of the piece with that taught by Lauder of making a can tool from yttria stabilized zirconia in order to produce a can tool with a lighter color.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coblentz in view of Kwon (6,160,835).

Coblentz is relied upon as discussed above.

Coblentz does not disclose laser engraving an alphanumeric or bar code character onto the yttria stabilized zirconia.

Kwon discloses laser engraving on a ceramic (Col 1 lines 11-12) and specifically on to a zirconia piece (Col 4 lines 24-26). Kwon further discloses laser engraving an embedded design and/or alphanumeric mark on to the piece (Col 9 line 36-37).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have modified the method taught by Coblentz of placing yttria stabilized zirconia at an elevated temperature in an oxidizing atmosphere to lighten the color of the piece with that taught by Kwon of laser engraving an embedded design and/or alphanumeric on to a zirconia piece in order to produce a yttria stabilized zirconia

piece having a lighter color and a mark or alphanumeric character laser engraved on to it.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gentsu (5,118,457 and 5,059,562), Briod (5,711,906) and Alexandrov (6,893,993) all disclose methods of changing the color of a yttria stabilized zirconia piece by controlling the atmosphere at an elevated temperature, specifically to darkening a yttria stabilized zirconia by heating it in a reducing atmosphere.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell J. Kemmerle III whose telephone number is 571-272-6509. The examiner can normally be reached on Monday through Friday, 8:30-4:00 EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RK


CHRIS FIORILLA
SUPERVISORY PATENT EXAMINER
Au 1734